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These discordances seem somewhat large in some cases, but it is to be remarked that they were obtained from the first measures made with the glass scale, and that none have been rejected, though later examination showed that they were sometimes rather rough in consequence of the want of familiarity of the measurers with their instruments. Nor has any correction been applied for the errors of *réseau*, or for distortion. Considering that these discordances are derived from the comparison of measures on two plates, they seem to show that a satisfactory degree of accuracy can be obtained by the simple method of measurement used.

On the Proper Motions of Three Stars in the Constellation Ophiuchus. By W. T. Lynn, B.A.

In the *Monthly Notices* for 1870 November I gave the proper motions, deduced from Airy's Greenwich Catalogues, of the double star 36 (A) *Ophiuchi* and of a star which in *Flamsteed* is the 30th catalogued in the constellation *Scorpio*, and is therefore called 30 *Scorpii* in Baily's *Flamsteed*, though Baily notes that it should have been included by *Flamsteed* in the constellation *Ophiuchus*, and it is therefore so arranged in the B.A.C., where it is given (without a constellation number) as No. 5813. In the Twelve-year Catalogue and in the two Seven-year Catalogues (it does not appear in the Six-year or in the Nine-year) Flamsteed's number, 30 *Scorpii*, is retained ; but in the Ten-year Catalogue (in which it is No. 2696) it is called in the text *Bradley* 2179.

I have thought it would be worth while to supplement my former paper by computing the proper motions of these stars from the later Greenwich Catalogues, and here set down all the places of the three which are given in them, from the first Seven-year to the Ten-year.

Authority.	Epoch.	A^1 Ophiuchi. R.A.	No. of Obs.	A^2 Ophiuchi. R.A.	No. of Obs.	Bradley 2179. R.A.	No. of Obs.
		h m s		h m s		h m s	
7-year for	1860	17 6 44·47	12	17 6 44·67	9	17 7 37·18	8
7-year „	1864	17 6 59·27	3	17 6 59·33	1	17 7 51·80	2
9-year „	1872	17 7 28·583	5	17 7 28·816	3	...	...
10-year „	1880	17 7 58·105	10	17 7 58·314	8	17 8 50·846	4
		N.P.D.		N.P.D.		N.P.D.	
		° ′ ″		° ′ ″		° ′ ″	
7-year for	1860	116 23 35·06	12	116 23 31·26	9	116 20 25·21	8
7-year „	1864	116 23 59·08	3	116 23 55·01	1	116 20 47·77	2
9 year „	1872	116 24 42·45	5	116 24 38·08	2	...	...
10-year „	1880	116 25 31·03	11	116 25 25·93	9	116 22 17·17	4

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From these places we obtain the following annual variations :—

		A¹ Ophiuchi. R.A.	A¹ Ophiuchi. N.P.D.	A² Ophiuchi. R.A.	A² Ophiuchi. N.P.D.	Bradley 2179. R.A.	Bradley 2179. N.P.D.
		s	″	s	″	s	″
From the years	1860–64	+3·700	+6·00	+3·665	+5·94	+3·655	+5·64
,,	1864–72	+3·664	+5·42	+3·686	+5·38	[1864–1880]	
,,	1872–80	+3·690	+6·07	+3·687	+5·98	+3·690	+5·59
From whole period	1860–80	+3·682	+5·80	+3·682	+5·73	+3·683	+5·60

Now the geometrical precessions for the three stars are, for 1860, in RA. $+ 3^{s}\cdot718$, $+ 3^{s}\cdot718$, and $+ 3^{s}\cdot717$ respectively, in N.P.D. $+ 4''\cdot62$, $+ 4''\cdot62$, and $4''\cdot54$; and for 1880, in RA. $+ 3^{s}\cdot720$, $+ 3^{s}\cdot720$, and $+ 3^{s}\cdot719$, in N.P.D. $+ 4''\cdot514$, $+ 4''\cdot514$, and $+ 4''\cdot439$, the means of which may safely be used in obtaining the proper motions.

In R.A.	Annual Variation.	Annual Precession.	Resulting Annual Proper Motion.
	s	s	s
A¹ Ophiuchi	+3·682	+3·719	−0·037
A² Ophiuchi	+3·682	+3·719	−0·037
Bradley 2179	+3·683	+3·718	−0·035

In N.P.D.	Annual Variation.	Annual Precession.	Resulting Annual Proper Motion.
	″	″	″
A¹ Ophiuchi	+5·80	+4·57	+1·23
A² Ophiuchi	+5·73	+4·57	+1·16
Bradley 2179	+5·60	+4·49	+1·11

These values of the proper motions would seem to be entitled to considerable confidence. Those which I obtained in 1871 by comparing the places in the Greenwich Twelve-year Catalogue with the New Seven-year for 1864 were, in RA. $- 0^{s}\cdot029$, $- 0^{s}\cdot043$, and $- 0^{s}\cdot042$ respectively, and in N.P.D. $+ 1''\cdot20$, $+ 1''\cdot05$, and $+ 1''\cdot17$; those adopted from Auwers in the Greenwich Ten-year Catalogue are, in R.A. $- 0^{s}\cdot039$, $- 0^{s}\cdot039$, and $- 0^{s}\cdot039$, and in N.P.D. $+ 1''\cdot138$, $+ 1''\cdot138$, and $+ 1''\cdot134$. What makes these stars so especially interesting is the circumstance that the third, distant from the first two, which form a pair, by about $12'\ 21''$ in a great circle, partakes with them in the same large proper motion, amounting to about $1''\cdot27$ in a great circle.

Perhaps I may be allowed to add that I have compared the places of a considerable number of stars for which no proper motions are given in the Ten-year Catalogue with the corresponding places in the Twelve-year, and all that I have examined are small, with the exception of *Piazzi* III 170, for which I find the annual proper motion in RA. $+ 0^{s}\cdot005$ and in N.P.D. $+ 0''\cdot145$,

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both smaller than those assigned in the B.A.C., the latter considerably so, the proper motion in N.P.D. there given amounting to + 0″·25.

Blackheath :
1894 *December* 7.

A Comparison of some Places of Stars observed at the Sydney Observatory with the Places of the same Stars as given in the Cape Catalogue, 1880. By H. P. Hollis.

The stars used in this comparison are contained in the latest publication from the Sydney Observatory, which was published in 1893, and gives the results of meridian observations made in the years 1879, 1880, 1881, in the form of annual catalogues for these years.

From these annual catalogues a catalogue has been formed for epoch 1880 of about 300 stars, all of which have been observed at least three times in either element, and only places which depend on at least three observations have been used in this comparison.

The places thus found have been compared with the places given in Mr. Stone's Cape Catalogue for epoch 1880, and Table I. gives the result of this comparison, the stars being arranged in order of R.A. and divided into hourly groups. The figures in columns 3 and 5 give the simple means of such groups.

TABLE I.

	R.A.		N.P.D.			R.A.		N.P.D.	
Limits of R.A.	No. of Stars.	Difference Sydney−Cape ×sin N.P.D.	No. of Stars.	Difference Sydney−Cape.	Limits of R.A.	No. of Stars.	Difference Sydney−Cape ×sin N.P.D.	No. of Stars.	Difference Sydney−Cape.
h h		s		″	h h		s		″
0–1	7	+0·080	5	+0·33	12–13	14	+0·026	11	−0·13
1–2	7	+0·058	8	+0·33	13–14	23	+0·055	22	−0·76
2–3	10	+0·140	9	+0·38	14–15	21	+0·116	20	−0·36
3-4	20	+0·224	20	−0·04	15-16	11	−0·054	10	−0·04
4–5	13	+0·202	13	+0·37	16–17	18	+0·055	18	−0·65
5–6	16	+0·098	16	+0·89	17–18	8	−0·011	8	+0·05
6-7	11	+0·082	10	+0·85	18–19	3	−0·050	3	+1·26
7–8	15	+0·093	14	−0·11	19–20	1	−0·030	1	+2·68
8–9	15	+0·041	15	+0·73	20–21	10	+0·006	10	−0·44
9–10	17	+0·015	16	+0·47	21–22	9	−0·001		+0·36
10–11	20	+0·013	20	+0·52	22–23	9	+0·044	9	+0·03
11–12	18	−0·015	16	−0·17	23–0	5	+0·053	5	+0·42